PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE PARTIAL INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AND THE PARTIAL REMOVAL OF THE EXISTING SIGNAL AT THE MD 175 AND DOBBIN ROAD INTERSECTION IN HOWARD COUNTY. MD 175 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION IS TO CONTINUE TO OPERATE IN A NEMA SIX PHASE, FULLY-TRAFFIC-ACTUATED MODE. THERE WILL BE EXCLUSIVE DOUBLE LEFT TURNS ON BOTH MD 175 APPROACHES. THE THROUGH MOVEMENTS ON MD 175 WILL OPERATE CONCURRENTLY WHILE THE DOBBIN ROAD APPROACHES WILL OPERATE AS A SIDE ROAD SPLIT.

CONTROL REQUIREMENTS

INSTALL AN EIGHT PHASE FULLY-TRAFFIC-ACTUATED SOILD STATE DIGITAL CONTROLLER WITH EIGHT FOUR-CHANNEL TIME DELAY OUTPUT, LOOP DETECTOR AMPLIFIERS, INTERSECTION MONITOR WITH HARNESS, BATTERY BACK-UP FOR PHONE DROP, TELEMETRY MODULE WITH HARNESS, TELEMETRY ISOLATION BOARD, QUICK CONNECT TERMINAL BLOCK AND SPECIAL RELAY HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET

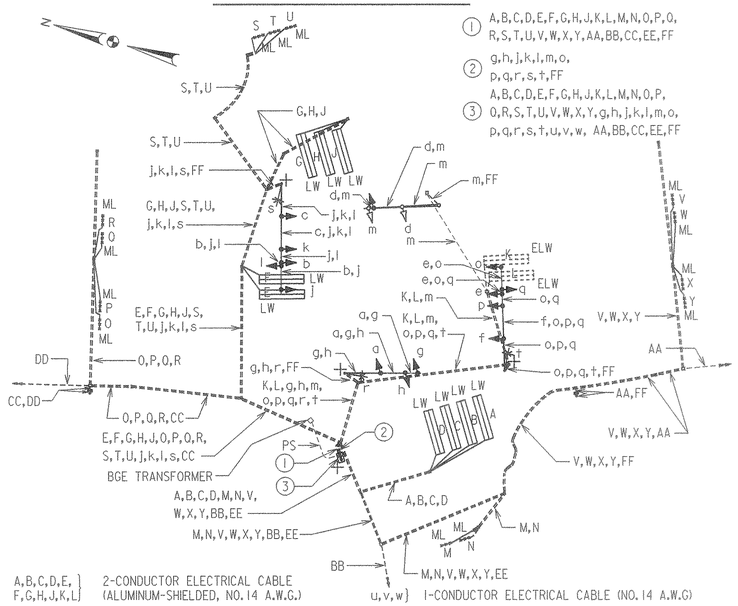
SPECIAL NOTE

THE EXISTING SIGNAL INTERCONNECT IS TO BE MAINTAINED. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF SIGNAL INTERCONNECT PLAN TO THE ENGINEER AND THE OFFICE OF TRAFFIC AND SAFETY FOR THEIR APPROVAL PRIOR TO ANY WORK COMMENCING WITH THE SIGNAL OR INTERCONNECT. LISTED BELOW ARE THE CURRENT OFFICE OF TRAFFIC AND SAFETY PERSONNEL.

ALL FIELD WIRING TO THE PROPOSED CONTROLLER CABINET SHALL TERMINATED AT THE APPROPRIATE CONTROLLER CABINET CONNECTORS, PLUS FIFTEEN FEET OF COILED CABLE, BY THE CONTRACTOR AND LABELLED. ALL OTHER CONTROLLER CABINET WIRING, EITHER AT THE PROPOSED OR EXISTING CONTROLLER, WILL BE PERFORMED BY THE S.H.A. SIGNAL SHOP. CONTACT MR. ROBERT SNYDER AT 410-787-7631 SEVENTY-TWO HOURS IN ADVANCE OF INTENDED WORK.

72 HOURS PRIOR TO ANY WORK ON THE TRAFFIC SIGNAL, THE CONTRACTOR SHALL NOTIFY THE DISTRICT 7 TRAFFIC SECTION REPRESENTATIVE, MR GEORGE MILLER (1-800-635-5119), THE SIGNAL OPERATIONS SUPERVISOR, MR. EDWARD RODENHIZER (410-787-7652) AND THE SIGNAL SYSTEMS REPRESENTATIVE, MR. WOODROW HOOD III (410-787-5878).

WIRING DIAGRAM



A,B,C,D,E, F,G,H,J,K,L	2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM-SHIELDED, NO. 14 A.W.G.)
M,N,O,P,Q,R, S,T,U,V,W,X,Y	MICRO-LOOP PROBE LEAD-IN
a,b,c, d,e,f	5-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
g,h,j,k,l,m, o,p,q	7-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
r,s,t	2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 A.W.G.)
u,v,w	1-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
AA	EXISTING INTERCONNECT TO SNOWDEN RIVER PARKWAY
BB	EXISTING INTERCONNECT TO DOBBIN CENTER WAY
CC	12 PAIR COMMUNICATION CABLE, JELLY-FILLED - BETWEEN THE TAMAR DRIVE SPLICE BOX AND DOBBIN ROAD
DD	EXISTING INTERCONNECT TO TAMAR DRIVE
EE	12 PAIR COMMUNICATION CABLE, JELLY-FILLED - BETWEEN THE SNOWDEN RIVER PARKWAY SPLICE BOX AND DOBBIN RD.
FF	STRANDED BARE COPPER GROUND WIRE (NO.6 A.W.G.)
ELW -	EXISTING LOOP WIRE
LW -	LOOP WIRE
ML -	MICRO-LOOP PROBE SET
PS -	PROPOSED ELECTRICAL SERVICE (UNDERGROUND)
	GROUND ROD, ¾ IN. X 10 FT.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION:

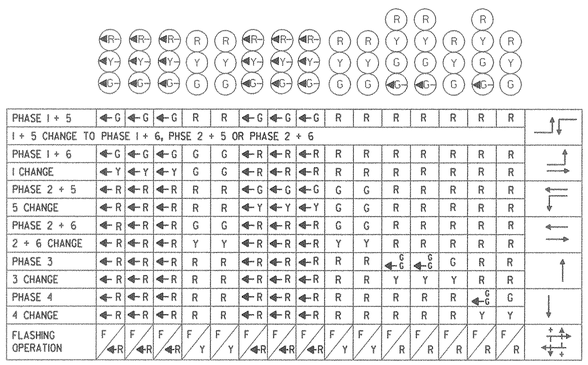
CATEGORY CODE NO.	SPEC. SECTION	QUANTITY	DESCRIPTION
960035	814	5 EA.	12 IN. 1 WAY 3 SECTION (R,Y,G) ADJUSTABLE POLYCARBONATE SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS
960037	814	6 EA.	12 IN. 1 WAY 3 SECTION (RA,YA,GA) ADJUSTABLE POLYCARBONATE SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS
960039	814	2 EA.	12 IN. 1 WAY 4 SECTION (R,Y,G,GA) ADJUSTABLE POLYCARBONATE SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS
971017	816	1 EA.	EIGHT PHASE, FULL TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH INTERSECTION MONITOR WITH HARNESS, BATTERY BACK-UP FOR PHONE DROP, TELEMETRY MODULE WITH HARNESS, TELEMETRY ISOLATION BOARD, QUICK CONNECT TERMINAL BLOCK AND SPECIAL RELAY HOUSED IN A NEMA SIZE "6" BASE-MOUNTED CABINET (PAINTED BROWN).
973023	813	116.25 S.F.	SHEET ALUMINUM SIGNS - 5 EACH R3-5(L) (30" X 36") - MAST ARM-MOUNT - 1 EACH R3-6(L) (30" X 36") - MAST ARM-MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "EAST, MD 175, RIGHT ARROW" (30" X 51") - POLE-MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "WEST, MD 175, LEFT ARROW" (48" X 75") - POLE-MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "WEST, MD 175, RIGHT ARROW" (30" X 51") - POLE-MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "EAST, MD 175, LEFT ARROW" (48" X 75") - POLE-MOUNT
900000	817	8 EA.	FOUR CHANNEL LOOP DETECTOR AMPLIFIER (DELAY OUTPUT)

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED AND SALVAGED BY THE CONTRACTOR AND DELIVERED TO THE STATES HIGHWAY ADMINISTRATION, 7491 CONNELLY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE WORKING DAYS IN ADVANCE OF DELIVERY.

QUANTITY	DESCRIPTION
1 EA.	BASE MOUNTED CABINET AND CONTROLLER WITH ALL EXISTING EQUIPMENT

PHASE DIAGRAM



EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE NO.	SPEC. SECTION	QUANTITY	DESCRIPTION
114245	104	40 L.F.	24 IN. REMOVABLE WHITE PREFORMED PAVEMENT MARKING TAPE
203030	205	4 C.Y.	TEST PIT EXCAVATION
801004	801	15.2 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
802501	810	50 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
805011	805	142 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED SLEEVE
805115	805	240 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
805118	805	290 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
805125	805	380 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
805135	805	30 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
805140	805	960 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
805155	805	200 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
811001	811	22 EA.	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813010	813	4 EA.	BAND SIGN TO SIGN SUPPORT
813015	813	45 S.F.	INSTALL OVERHEAD SIGN
837001	804	4 EA.	FURNISH AND INSTALL GROUND ROD - ¾ IN. DIAMETER X 10 FT. LENGTH
838002	807	1 EA.	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (240/480V, 1 PHASE, 3 WIRE SYST.)
860035	814	5 EA.	INSTALL 12 IN. 1 WAY 3 SECTION (R,Y,G) POLYCARBONATE SIGNAL HEAD - MAST ARM MOUNT
860037	814	6 EA.	INSTALL 12 IN. 1 WAY 3 SECTION (RA,YA,GA) POLYCARBONATE SIGNAL HEAD - MAST ARM MOUNT
860039	814	2 EA.	INSTALL 12 IN 1 WAY 4 SECTION (R,Y,G,GA) POLYCARBONATE SIGNAL HEAD - MAST ARM MOUNT
861104	810	2510 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2-CONDUCTOR (ALUMINUM-SHIELDED)
861107	810	210 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5-CONDUCTOR (NO. 14 A.W.G.)
861108	810	3190 L.F.	FURNISH AND INSTALL ELECTRCIAL CABLE - 7-CONDUCTOR (NO. 14 A.W.G.)
861116	810	710 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2-CONDUCTOR (NO. 12 A.W.G.)
862101	810	3815 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
862102	815	1445 L.F.	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR))
866101	818	3 EA.	FURNISH AND INSTALL 10 FT. LIGHTING ARM ON SIGNAL STRUCTURE
871117	816	1 EA.	INSTALL EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE-MOUNT
873001	XXX	LUMP SUM	REMOVE AND SALVAGE EXISTING EQUIPMENT
800000	810	11 EA.	FURNISH AND INSTALL MICRO LOOP PROBE SET WITH 1000 FT. LEAD-IN
800000	810	2 EA.	FURNISH AND INSTALL MICRO LOOP PROBE SET WITH 500 FT. LEAD-IN
800000	805	35 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	805	135 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	806	3 EA.	FURNISH AND INSTALL 250-WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE WITH PHOTO CELL
800000	813	2 EA.	RELOCATE EXISTING SIGN
800000	818	2 EA.	FURNISH AND INSTALL 27' STEEL MAST ARM POLE AND SINGLE 70' MAST ARM (PAINTED BROWN)
800000	818	1 EA.	FURNISH AND INSTALL 27' STEEL MAST ARM POLE AND SINGLE 50' MAST ARM (PAINTED BROWN)
800000	XXX	LUMP SUM	REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT
800000	XXX	LUMP SUM	DELIVERY OF SALVAGED TRAFFIC SIGNAL EQUIPMENT

MAINTENANCE OF TRAFFIC PHASE I

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND

REVISIONS

10-25-85 ADDENDUM TO H0-581-501-771
Ⓒ LOCATION OF CONTROLLER CHANGED TO SW QUAD FROM SE ISLAND

Ⓓ 3-97 ADDITION OF EB MD 175 LOOP DETECTOR FOR NEW LEFT TURN LANE AND HANDHOLE RELOCATION

Ⓔ 6-97 - WTB - H07645170 RECONSTRUCT SIGNAL TO NEW GEOMETRICS

JDM

APPROVALS

ASST. DIVISION CHIEF, TEDD

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, OFFICE OF TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

MD 175 AND DOBBIN ROAD

LOG MILE NO. 130175041.8 DATE 3/16/76

DRAWN BY: J.G. & D. ZAFRIS	F.A.P. NO.	SEE TITLE SHEET	PLAN SHEET NO.:	SHEET NO.	
CHECK BY: N/A	S.H.A. NO.	H0-400-501-785	TS-1396E-XI-G	27	OF 46
SCALE: NONE	COUNTY	HOWARD			